

Chapter 2

Interfaces and Class of Service Configuration Statements

This chapter shows the complete configuration statement hierarchy, listing all possible configuration statements and showing their level in the configuration hierarchy. When you are configuring the JUNOS software, your current hierarchy level is shown in the banner on the line preceding the user@host# prompt.

This chapter is organized as follows:

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[edit class-of-service] Hierarchy Level

```
class-of-service {  
    classifiers {  
        (dscp | exp | ieee-802.1 | inet-precedence) classifier-name {  
            import (classifier-name | default);  
            forwarding-class class-name {  
                loss-priority (low | high) code-points [ alias | bits ];  
            }  
        }  
    }  
    code-point-aliases {  
        (dscp | exp | ieee-802.1 | inet-precedence) {  
            alias-name bits;  
        }  
    }  
    drop-profiles {  
        profile-name {  
            fill-level percentage drop-probability percentage;  
            interpolate {  
                drop-probability value;  
                fill-level value;  
            }  
        }  
    }  
    forwarding-classes {  
        queue queue-number class-name priority (low | high);  
    }  
}
```

```

forwarding-policy {
    next-hop-map map-name {
        forwarding-class class-name {
            next-hop [ next-hop-name ];
            lsp-next-hop [ lsp-regular-expression ];
        }
    }
    class class-name {
        classification-override {
            forwarding-class class-name;
        }
    }
}
interfaces
interface-name {
    scheduler-map map-name;
    unit logical-unit-number {
        classifiers {
            (dscp | exp | ieee-802.1 | inet-precedence) (classifier-name | default);
        }
        forwarding-class class-name;
        rewrite-rules {
            (dscp | exp | inet-precedence) (rewrite-name | default);
        }
    }
}
rewrite-rules {
    (dscp | exp | inet-precedence) rewrite-name {
        import (rewrite-name | default);
        forwarding-class class-name {
            loss-priority (low | high) code-point (alias | bits);
        }
    }
}
scheduler-maps {
    map-name {
        forwarding-class class-name scheduler scheduler-name;
    }
}
.schedulers
scheduler-name {
    buffer-size (percent percentage | remainder);
    drop-profile-map loss-priority (low | high) protocol (non-tcp | tcp | any) drop-profile profile-name;
    priority (low | high | strict-high);
    transmit-rate (rate | percent percentage | remainder | exact);
}
}
}

```

[edit interfaces] Hierarchy Level

```

interfaces {
    interface-name {
        disable;
        accounting-profile name;
        description text;
        aggregated-ether-options {
            (flow-control | no-flow-control);
            link-speed speed;
            (loopback | no-loopback);
            minimum-links number;
            source-address-filter {
                mac-address;
            }
            (source-filtering | no-source-filtering);
        }
        aggregated-sonet-options {
            link-speed speed;
            minimum-links number;
        }
        atm-options {
            promiscuous-mode;
            vpi vpi-identifier maximum-vcs maximum-vcs;
            ilmi;
            e3-options {
                atm-encapsulation (direct | PLCP);
                buildout distance (ft | m);
                framing (g751 | g832);
                loopback (local | remote);
                (payload-scrambler | no-payload-scrambler);
            }
            t3-options {
                atm-encapsulation (direct | PLCP);
                buildout distance (ft | m);
                (cbit-parity | no-cbit-parity);
                loopback (local | remote);
                (payload-scrambler | no-payload-scrambler);
            }
        }
        clocking clock-source;
        dce;
        e1-options {
            bert-error-rate rate;
            bert-period seconds;
            fcs (32 | 16);
            framing (g704 | g704-no-crc4 | unframed);
            idle-cycle-flag (flags | ones);
            invert-data;
            loopback (local | remote);
            start-end-flag (shared | filler);
            timeslots slot-number;
        }
    }
}

```

```

e3-options {
    bert-algorithm algorithm;
    bert-error-rate rate;
    bert-period seconds;
    compatibility-mode (digital-link | kentrox) <substrate value>;
    fcs (32 | 16);
    idle-cycle-flag value;
    loopback (local | remote);
    (payload-scrambler | no-payload-scrambler);
    start-end-flag value;
}
encapsulation type;
fastether-options {
    802.3ad aex;
    (flow-control | no-flow-control);
    ingress-rate-limit rate;
    (loopback | no-loopback);
    source-address-filter {
        mac-address;
    }
    (source-filtering | no-source-filtering);
}
gigether-options {
    802.3ad aex;
    (flow-control | no-flow-control);
    (loopback | no-loopback);
    source-address-filter {
        mac-address;
    }
    (source-filtering | no-source-filtering);
}
hold-time up milliseconds down milliseconds;
keepalives <down-count number> <interval seconds> <up-count number>;
link-mode mode;
lmi {
    lmi-type (ansi | itu);
    n391dte number;
    n392dce number;
    n392dte number;
    n393dce number;
    n393dte number;
    t391dte seconds;
    t392dce seconds;
}
mac mac-address;
mtu bytes;
multiservice-options {
    boot-command filename
    (core-dump | no-core-dump);
    (syslog | no-syslog);
}
no-keepalives;
no-traps;
ppp-options {
    chap {
        access-profile name;
        local-name name;
        passive;
    }
}

```

```

receive-bucket {
    overflow (tag | discard);
    rate percentage;
    threshold number;
}
sonet-options {
    aggregate asx;
    aps {
        advertise-interval milliseconds;
        authentication-key key;
        force;
        hold-time milliseconds;
        lockout;
        neighbor address;
        paired-group group-name;
        protect-circuit group-name;
        request;
        revert-time seconds;
        working-circuit group-name;
    }
    bytes {
        e1-quiet value;
        f1 value;
        f2 value;
        s1 value;
        z3 value;
        z4 value;
    }
    fcs (32 | 16);
    loopback (local | remote);
    path-trace trace-string;
    (payload-scrambler | no-payload-scrambler);
    rfc-2615;
    (z0-increment | no-z0-increment);
}
speed (10m | 100m);
t1-options {
    bert-algorithm algorithm;
    bert-error-rate rate;
    bert-period seconds;
    buildout (0-133 | 133-266 | 266-399 | 399-532 | 532-655);
    byte-encoding (nx64 | nx56);
    fcs (32 | 16);
    framing (sf | esf);
    idle-cycle-flag (flags | ones);
    invert-data;
    line-encoding (ami | b8zs);
    loopback (local | remote);
    start-end-flag (shared | filler);
    timeslots slot-number;
}

```

```

t3-options {
    bert-algorithm algorithm;
    bert-error-rate rate;
    bert-period seconds;
    (cbit-parity | no-cbit-parity);
    compatibility-mode (digital-link | kentrox | larscom) <substrate value>;
    fcs (32 | 16);
    (feac-loop-respond | no-feac-loop-respond);
    idle-cycle-flag value;
    (long-buildout | no-long-buildout);
    loopback (local | remote);
    (mac | no-mac);
    (payload-scrambler | no-payload-scrambler);
    start-end-flag value;
}
traceoptions {
    flag flag <flag-modifier> <disable>;
}
transmit-bucket {
    overflow (discard);
    rate percentage;
    threshold number;
}
vlan-tagging;
unit logical-unit-number {
    accounting-profile name;
    allow-any-vci;
    bandwidth rate;
    description text;
    disable;
    dlci dlci-identifier;
    drop-timeout milliseconds;
    encapsulation type;
    fragment-threshold bytes;
    inverse-arp;
    minimum-links number;
    mrru bytes;
    multicast-dlci dlci-identifier;
    multicast-vci vpi-identifier.vci-identifier;
    multipoint;
    no-traps;
    oam-liveness {
        up-count cells;
        down-count cells;
    }
    oam-period (disable | seconds);
    passive-monitor-mode;
    point-to-point;
    shaping {
        (cbr rate | vbr peak rate sustained rate burst length);
        queue-length number;
    }
    short-sequence;
    tunnel {
        source source-address;
        destination destination-address;
        routing-instance {
            destination routing-instance-name;
        }
        ttl number;
    }
    vci vpi-identifier.vci-identifier;
    vlan-id number;
}

```

```

family family {
    accounting {
        destination-class-usage;
        source-class-usage {
            (input | output | [input output]);
        }
    }
    bundle ml-fpc/pic/port;
    filter {
        input filter-name;
        output filter-name;
        group filter-group-number;
    }
    ipsec-sa sa-name;
    mtu bytes;
    multicasts-only;
    no-redirects;
    policer {
        input policer-template-name;
        output policer-template-name;
        primary;
        remote mac-address address;
        rpf-check fail-filter filter-name;
        address address {
            arp ip-address (mac | multicast-mac) mac-address <publish>;
            destination destination-address;
            eui-64;
            broadcast address;
            multipoint-destination destination-address (dlci dlci-identifier | vci vci-identifier);
            multipoint-destination destination-address {
                inverse-arp;
                oam-liveness {
                    up-count cells;
                    down-count cells;
                }
                oam-period seconds;
                shaping {
                    (cbr rate | vbr peak rate sustained rate burst length);
                    queue-length number;
                }
                vci vpi-identifier.vci-identifier;
            }
            preferred;
            primary;
            vrrp-group group-number {
                virtual-address [addresses];
                priority number;
                (accept-data | no-accept-data);
                advertise-interval seconds;
                authentication-type authentication;
                authentication-key key;
                (preempt | no-preempt);
                track {
                    interface interface-name priority-cost cost;
                }
            }
        }
    }
}

```

- [edit protocols connections] Hierarchy Level

```
•     interface-switch connection-name {  
•         interface interface-name.unit-number;  
•         interface interface-name.unit-number;  
•     }
```

- [edit protocols vrrp] Hierarchy Level

```
•     traceoptions {  
•         file {  
•             filename filename;  
•             files number;  
•             size size;  
•             (world-readable | no-world-readable);  
•         }  
•         flag flag;  
•     }
```